

10/820,579

Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of claims in this application:

Listing of the Claims:

1. (Currently amended) An intra-oral camera for producing a picture of an intra-oral object wherein the intra-oral object may include a tooth of a dental patient, the intra-oral camera comprising:
 - a camera (44) operable ~~by a user~~ to take a picture of the intra-oral object once the ~~user has oriented~~ the camera has been oriented in a proper picture taking position relative to the intra-oral object, the camera being operable to capture sight information relating to the intra-oral object;
 - a pinpoint light source ~~(48, 50)~~ for irradiating the intra-oral object with a pinpoint light beam; and
 - indicating means (26) for indicating that the camera (44) has substantially assumed the proper picture taking position relative to the intra-oral object for the taking of a picture of the intra-oral object, the indicating means (26) being operable to evaluate at least one of sight information relating to the intra-oral object and light, captured by the camera (44), which comprises light coming from the intra-oral object in response to the irradiation thereof by the pinpoint light source ~~(48, 50)~~ and to provide an indication that the camera (44) has substantially assumed the proper picture taking position relative to the intra-oral object based upon such evaluation.
2. (Currently amended) A camera according to claim 1, wherein the ~~light source (48, 50) is, preferably, a~~ pinpoint light source ~~[[and]]~~ comprises at least one laser diode ~~(204)~~ that projects a light point onto the tooth of the dental patient and the camera (44) provides sight information relating to the light properties of the light coming from the intra-oral object in response to the irradiation thereof by the light point projected on the intra-oral object by the laser diode ~~(204)~~.
3. (Currently amended) A camera according to claim 1, wherein the optical axis of the camera and the light point produced via the light source coincide at an intersection point, the

~~camera (44) comprises an optical axis (49) which extends through the objective of the camera and forms a light point in the middle of the camera picture receipt region and the light source (48, 50) is being oriented at an angle to the optical axis (49).~~

4. (Currently amended) A camera according to claim 3, wherein the angled orientation of the light source ~~(48, 50)~~ relative to the optical axis (49) is such that, at a given spacing of the camera from the intra-oral object, the optical axis (49) coincides with or intersects the light point projected onto the intra-oral object from the light source ~~(48, 50)~~ and, in particular, intersects such centrally thereof.

5. (Currently amended) A camera according to claim 1, wherein the light source comprises at least two laser diodes ~~(204)~~ which project light onto the intra-oral object and are, in particular, symmetrically oriented relative to one another.

6. (Currently amended) A camera according to claim 2, wherein the indicating means (26) is operable to evaluate sight information relating to the light property of one of the laser diodes ~~(204)~~ and to indicate that the camera (44) has substantially assumed the proper picture taking position relative to the intra-oral object as soon as the camera has either been focused or has been properly aimed.

7. (Currently amended) A camera according to claim 1, and further comprising means for permitting at least one of either an automatic picture taking operation ~~[[and]]~~ or a manually actuated picture taking operation in response to an indication that the camera (44) has substantially assumed, for a predetermined interval, the proper picture taking position relative to the intra-oral object.

8. (Currently amended) A camera according to claim 1, wherein the indicating means (26) displays whether the camera (44) has been oriented relative to a selected selectively cropped camera frame portion relating to the sight information, whereby the selectively cropped camera frame portion overlays the light coming from the intra-oral object in response to the irradiation thereof by the light source ~~(48, 50)~~.

9. (Currently amended) A camera according to claim 8, wherein the light source (48; 50) is a pinpoint light source that projects a light point onto the tooth of the dental patient and the selectively cropped camera frame portion is larger than the light point and, in particular, is approximately twice as large as the surface of the light point.

10. (Original) A camera according to claim 6, wherein the indicating means (26) is operable to subdivide a selected selectively cropped camera frame portion relating to the sight information into subdivisions and to evaluate a raster formed by such subdivisions by comparing the light properties of various fields of the raster and thereby determine whether the camera (44) has substantially assumed the proper picture taking position relative to the intra-oral object.

11. (Currently amended) A camera according to claim 1, wherein the indicating means (26) is operable to subdivide a selected selectively cropped camera frame portion relating to the sight information into subdivisions, wherein the selectively cropped frame portion is; ~~preferably, at least 10 times smaller than the sight information and, most preferably, 100 times smaller than the sight information~~ and the indicating means (26) is ~~preferably~~ operable to subdivide the selected selectively cropped camera frame portion into a point symmetric number of subdivided fields collectively forming a raster mass and the indicating means (26) is operable to evaluate the raster mass by capturing and comparing with one another at least one of parameters and light properties of the various adjacent ones of the fields of the raster mass and to thereby determine whether the camera (44) has substantially assumed the proper picture taking position relative to the intra-oral object.

12. (Currently amended) A method for producing a picture of an intra-oral object wherein the intra-oral object may include a tooth of a dental patient, the method comprising:
providing an intra-oral camera and a pinpoint light source;
orienting [[a]] the camera (44) to take a picture of the intra-oral object, the camera being operable to capture sight information relating to the intra-oral object;
optionally as needed, adjusting the orientation of [[a]] the pinpoint light source (48; 50) relative to the intra-oral object such that the intra-oral object will be irradiated by a light beam from the pinpoint light source (48; 50) as the camera (44) is actuated to take a picture of the intra-oral object; and

indicating, in response to an evaluation of at least one of sight information relating to the intra-oral object and light, captured by the camera (44), which comprises light coming from the intra-oral object in response to the irradiation thereof by the pinpoint light source (48, 50), that the camera (44) has substantially assumed a proper picture taking position relative to the intra-oral object for the taking of a picture of the intra-oral object.

13. (Currently amended) A method according to claim 12, wherein the pinpoint light source (48, 50) comprises at least one laser diode (204) and, preferably, two laser diodes (204), that project a light point onto the tooth of the dental patient and the step of indicating includes indicating that the camera (44) has substantially assumed a proper picture taking position relative to the intra-oral object for the taking of a picture of the intra-oral object based upon an evaluation of light, captured by the camera (44), which is formed of light coming from the intra-oral object in response to the irradiation thereof by the light point projected on the intra-oral object by the at least one laser diode (204).

14. (Currently amended) A method according to claim 13, wherein the step of indicating includes evaluating sight information relating to the light property of one of the laser diodes (204) and indicating that the camera (44) has substantially assumed the proper picture taking position relative to the intra-oral object based upon the evaluation of sight information relating to the light property of one of the laser diodes (204) as soon as the camera, while it is being oriented during the step of orienting, has substantially assumed the proper picture taking position relative to the intra-oral object.

15. (Currently amended) A method according to claim 12, and further comprising permitting at least one of either an automatic picture taking operation [[and]] or a manually actuated picture taking operation in response to an indication that the camera (44) has substantially assumed, for a predetermined interval, the proper picture taking position relative to the intra-oral object.

16. (Currently amended) A method according to claim 13, wherein the step of indicating includes indicating whether the camera (44) has been oriented relative to a selected selectively cropped camera frame portion relating to the sight information, whereby the selectively

cropped camera frame portion overlays the light coming from the intra-oral object in response to the irradiation thereof by the pinpoint light source (48, 50).

17. (Original) A method according to claim 12, and further comprising:
subdividing a selected selectively cropped camera frame portion relating to the sight information into subdivisions, wherein the subdivisions form the fields of a raster,
thereafter indicating that the camera (44) has generally assumed a proper picture taking position relative to the intra-oral object,
thereafter comparing with one another the light properties of the various fields of the raster, and
thereafter indicating, via marking of the central fields of the raster, that the camera (44) has substantially assumed the proper picture taking position relative to the intra-oral object.